

position of the plurality of positions and providing an output if the portion intersects the current position;

C/ (b) providing a mask for the portion if it is determined that the portion intersects the current position, the mask indicating an extent to which the portion occupies the area of the current position;

(c) using the mask to provide antialiasing for the portion at the current position;

(d) repeating steps (a)-(c) for each remaining object of the at least one object at the current position; and

(e) repeating steps (a) through (d) for each remaining position of the plurality of positions once step (d) is performed for the current position;

thereby allowing the graphical image to be rendered position by position;

wherein each of the plurality of positions is a pixel and wherein the current position is a current pixel on the display.

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✓ Please cancel claim 4.

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C2 5. (Amended) The method of claim 1 further comprising the step of:

(f) removing the portion if the portion is obstructed.

10. (Twice amended) A system for generating a graphical image on a display from data describing at least one object, the system comprising:

a display including a plurality of positions, each of the plurality of positions having an area;

a processor block coupled with the display, the processor block for determining if a portion of each of the at least one object intersects a current position of the plurality of positions and providing an output if the portion intersects the current position;

C2 an interpolator coupled with the processor block, the interpolator for interpolating the data and providing a mask for the portion, the mask indicating an extent to which the portion occupies the area of the current position; and

means for utilizing the mask to provide antialiasing;

wherein the at least one object are rendered by the interpolator and the mask utilizing means position by position in raster order; and

wherein the processor block provides the output for all of the at least one object intersecting the current position before providing an output for any of the at least one object intersecting a subsequent position;

wherein each of the plurality of positions is a pixel and the current position is a current pixel.

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~~Please cancel claim 13.~~

14. (Amended) The system of claim 10 further comprising:

C3 means for sorting each of the at least one portion based on the z-value.